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Pharmacological effects of Withania somnifera root extract on GABAA receptor complex.

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Abstract

A methanolic extract of *W. somnifera* root inhibited the specific binding of [3H]GABA and [35S]TBPS, and enhanced the binding of [3H]flunitrazepam to their putative receptor sites. The extract (5 micrograms) inhibited [3H]GABA binding by 20 +/- 6 per cent whereas a concentration of 1 mg of the extract produced 100 per cent inhibition. The extract (5-100 micrograms) produced 20 +/- 4 to 91 +/- 16 per cent enhancement of [3H]flunitrazepam binding. In functional studies using 36Cl-influx assay in mammalian spinal cord neurons, *W. somnifera* root extract increased 36Cl-influx in the absence of GABA. This effect on 36Cl-influx was blocked by bicuculline and picrotoxin; and enhanced by diazepam. **These results suggest that the *W. somnifera* extract contains an ingredient which has a GABA-mimetic activity.**

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MeSH terms, Substances